



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,736	10/24/2003	Peter Georgantzis	2000-012-B	6523

7590 07/08/2004

U.S. Army TACOM-ARDEC  
Attn: AMSTA-AR-GCL  
M. Sachs / Building 3  
Picatinny Arsenal, NJ 07806-5000

EXAMINER
----------

PARSLEY, DAVID J

ART UNIT	PAPER NUMBER
----------	--------------

3643

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/695,736

**Applicant(s)**

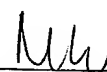
GEORGANTZIS ET AL.

**Examiner**

David J Parsley

**Art Unit**

3643



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **Detailed Action**

### ***Preliminary Amendment***

1. Entry of applicant's preliminary amendment dated 10-24-03 into the application file is acknowledged.

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the longitudinal rifling grooves must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to what is being claimed in regards to the "electric primer".

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by GB Patent No. 1085045.

Referring to claims 1 and 11, the British patent discloses a munition comprising, a cartridge – see figures 1-2, comprising a base member – proximate 12,14 or 13, and an adapter case – at 6, at an opposite end, an electric primer – see pages 1-2, affixed to the base member, a canister – at 4, secured to the adapter case – see figures 1-2, wherein the canister contains a payload – at 8, and is closed by a cap – at 1, wherein the canister further comprises a plurality of longitudinal rifling grooves that provide a rifled spinning movement to the canister during flight – see for example page 1 lines 60-70 and page 2 lines 12-60, wherein the longitudinal rifling grooves further weaken the structure of the canister, so that during flight, air pressure is exerted on the cap and a centrifugal force results from the rifled spinning movement, causing the canister to break apart and the payload to be dispersed – see for example page 2 lines 12-60.

Referring to claim 7, the British patent discloses the cap – at 1, is generally flat – see the tip of cap – 1 in figure 1.

Referring to claim 8, the British patent discloses the canister comprises a closed generally dome-shaped payload area – proximate 4, that is secured to the adapter case – at 6 – see for example figures 1-2.

Art Unit: 3643

Referring to claim 9, the British patent discloses the canister is releasably secured to the adapter case – see for example figures 1-2 and pages 1-2.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,906,860 to Johns in view of the British patent.

Referring to claim 1 and 11, Johns discloses a munition comprising, a cartridge – at 12-28, comprising a base member – at 12,14, and an adapter case – at 28, at an opposite end, an electric primer – at 34,48,54, affixed to the base member, a canister – at 22, secured to the adapter case – see figures 1-2, wherein the canister contains a payload – at 62, and is closed by a cap – at 36,38, wherein rifling grooves in the gun barrel cause spinning of the munition, wherein grooves – proximate 58,60, further weaken the structure of the canister, so that during flight, air pressure is exerted on the cap and a centrifugal force results from the rifled spinning movement, causing the canister to break apart and the payload to be dispersed – see for example column 2 lines 53-68. Johns does not disclose wherein the canister further comprises a plurality of longitudinal rifling grooves that provide a rifled spinning movement to the canister during flight. The British patent does disclose the canister further comprises a plurality of longitudinal rifling

Art Unit: 3643

grooves that provide a rifled spinning movement to the canister during flight – see for example page 1 lines 60-70 and page 2 lines 12-60. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Johns and add the rifled grooves of the British patent, so as to allow for the munition to have a greater penetration force.

Referring to claim 5, Johns as modified by the British patent further discloses the payload comprises steel balls – at 62 of Johns.

Referring to claim 7, Johns as modified by the British patent further discloses the cap – at 38 of Johns, is generally flat.

Referring to claim 8, Johns as modified by the British patent further discloses the canister at 22 of Johns, comprises a closed, generally dome-shaped payload area – proximate 16, that is secured to the adapter case – at 28 – see for example figure 1 of Johns.

Referring to claim 9, Johns as modified by the British patent further discloses the canister is releasably secured to the adapter case – see proximate 58,60 in figure 1 of Johns.

Referring to claim 10, Johns as modified by the British patent further discloses the canister is secured to the adapter case by means of an obturator – at 58,60 of Johns.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the British patent or Johns as modified by the British patent as applied to claim 1 above, and further in view of U.S. Patent Application Publication No. 2002/0124759 to Amick. The British patent and Johns as modified by the British patent do not disclose the canister is made of aluminum. Amick discloses the canister – 92 is aluminum – see page 6 paragraph 0057. Therefore it would have been obvious to one of ordinary skill in the art to take the ammunition of the British patent or

Art Unit: 3643

Johns as modified by the British patent and add the canister made of aluminum of Amick, so as to make the device more lightweight while maintaining strength and rigidity.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the British patent or Johns as modified by the British patent as applied to claim 1 above, and further in view of U.S. Patent No. 4,982,666 to Wohler. The British patent and Johns as modified by the British patent do not disclose the payload comprises a combination of tungsten balls and tungsten cubes. Wohler discloses the payload comprises a combination of tungsten balls – 122 and tungsten cubes – 120 – see for example figures 3-5 and column 8 lines 49-68 which states the balls and cubes are made of a hard metal and tungsten is a hard metal used as a shot in shell casings, known to those of ordinary skill in the art. Therefore it would have been obvious to one of ordinary skill in the art to take the ammunition of the British patent or Johns as modified by the British patent and add the payload comprising tungsten balls and tungsten cubes of Wohler, so as to allow for the payload objects to disperse during firing of the ammunition so as to ensure that the target is hit.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the British patent as applied to claims 1 or 9 above, and further in view of Johns.

Referring to claim 5, The British patent further discloses the payload comprises balls – at 8. The British patent does not disclose the balls are made of steel. Johns does disclose the payload comprises steel balls – at 62. Therefore it would have been obvious to one of ordinary skill in the art to take the device of the British patent and add the steel balls of Johns, so as to allow for the device to be durable and to effect greater penetration of the munition.



Art Unit: 3643

Referring to claim 10, the British patent does not disclose the canister is secured to the adapter case by means of an obturator. Johns does disclose the canister is secured to the adapter case by means of an obturator – see at 58,60 in figure 1. Therefore it would have been obvious to one of ordinary skill in the art to take the device of the British patent and add the obturator connection means of Johns, so as to allow for the device to break apart after exiting the barrel of the weapon from which it is fired.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to payload carrying ammunition in general:

U.S. Pat. No. 38,359 to Smith et al. – shows munition with payload

U.S. Pat. No. 229,499 to Turner – shows munition with payload

U.S. Pat. No. 319,629 to Russell – shows munition with payload

U.S. Pat. No. 1,272,984 to Mutro – shows munition with payload

U.S. Pat. No. 1,351,078 to Walker – shows munition with payload

U.S. Pat. No. 3,215,075 to Bayard et al. – shows munition with payload

U.S. Pat. No. 3,249,049 to Zimmerman – shows munition with electric primer

U.S. Pat. No. 3,779,167 to Irish, Jr. et al. – shows munition with payload

U.S. Pat. No. 3,991,682 to Peak – shows munition with payload

Art Unit: 3643

U.S. Pat. No. 4,085,677 to Marcinkiewicz -- shows munition with payload

U.S. Pat. Appl. Pub. No. 2002/0124759 to Amick -- shows munition with payload

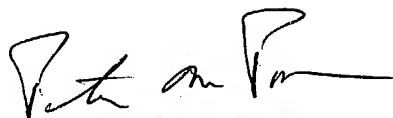
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J Parsley whose telephone number is (703) 306-0552. The examiner can normally be reached on 9hr compressed.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (703) 308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Parsley  
Patent Examiner  
Art Unit 3643



PETER M. POON  
SUPERVISORY PATENT EXAMINER

7/1/04